

REMARKS

Upon entry of this amendment, claims 9, 13-39 and 41-63 will be pending in this application, claims 1-8, 10-12, and 40 having been canceled without prejudice or disclaimer to their reintroduction herein or in a future continuation or divisional application.

Applicant respectfully submits that the original disclosure supports the amendments to the claims and the subject matter of new claims 52-63. The amendments to claims 9, 20, 29, and 41 are supported in the original disclosure at, for example, page 15, lines 7-22, page 16, line 10 to page 17, line 6-16, and Figures 7-10. The dependencies of claims 13-16 have been amended in view of the cancellation of claim 10. Other minor clarifying amendments have been made to claims 9, 20, 29, 31, 41, and 43. The subject matter of new claims 52, 55, 58, and 61 are supported in the original disclosure at, for example, page 10, lines 5-7 and Figures 1 and 7-10. New claims 53, 56, 59, and 62 are supported in the original disclosure at, for example, page 16, lines 1-15. New claims 54, 57, 60, and 63 are supported in the original disclosure at, for example, page 16, line 16 to page 17, line 6. Approval and entry are respectfully requested.

Drawings

Figures 11, 12, 13A and 13B have been objected to as lacking a prior art legend.

Applicant has submitted corrected drawings herewith, in accordance with the Examiner's constructive suggestion. Approval and entry of the corrected drawings and withdrawal of this objection are respectfully requested.

Claim Rejections -- 35 U.S.C. § 102

Claims 1, 7, and 8 have been rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,735,260 to Wohrl et al. (hereinafter "Wohrl").

Applicant respectfully submits that this rejection has been rendered moot by the cancellation of claims 1, 7, and 8, and therefore respectfully requests withdrawal of this rejection.

Claims 1, 2, 6-9, 16, 19, 40-44, 48, and 51 have been rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 3,948,295 to Lemont et al. (hereinafter "Lemont").

Applicant respectfully submits that the rejection of claims 1, 2, 6-8, and 40 have been rendered moot. Applicant respectfully traverses the rejection of claims 9, 16, 19, 41-44, 48, and 51.

The inventions as defined in the claims above recite multi-layer tubing comprising a thermally conductive metal layer and a substantially thermally non-conductive, metallic felt layer. The metal layer and metallic felt layer collectively form a laminate configured as a substantially cylindrical structure with the metallic felt layer positioned radially inward of the metal layer. The opposite side edge portions of the metal layer overlap and are coupled to one another at a coupling portion. As clarified by the amendments above, within the coupling portion at least one of the opposite side edge portions of the metallic felt layer is interposed between the side edge portions of the metal layer.

Unlike the present invention, Lemont does not disclose a tube comprising a coupling portion as characterized in the present claims. Each of the laminate layers of the Lemont insulation tubing is defined by a continuous circular cross section.

For these reasons, Applicant respectfully requests reconsideration and withdrawal of this rejection.

Claims 1, 2, and 4-8 have been rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 3,390,750 to Albertson.

Applicant respectfully submits that this rejection has been rendered moot by the cancellation of claims 1, 2, and 4-8, and therefore respectfully requests withdrawal of this rejection.

Claim Rejections -- 35 U.S.C. § 103

Claims 1-8 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Wohrl in view of U.S. Patent No. 6,465,110 to Boss et al. (hereinafter "Boss").

Applicant respectfully submits that this rejection has been rendered moot by the cancellation of claims 1-8, and therefore respectfully requests withdrawal of this rejection.

Claims 1-51 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over LeMont in view of Boss, and further in view of U.S. Patent No. 5,020,481 to Nelson (hereinafter "Nelson").

The rejection against claims 1-8, 10-12, and 40 has been rendered moot. Applicant respectfully traverses the rejection against claims 9, 13-39, and 41-51.

As brought out more clearly by the above amendments, the multi-layer tubing and related method of the present invention involve a thermally conductive metal layer and a substantially thermally non-conductive, metallic felt layer. The metal layer and metallic felt layer collectively form a laminate configured as a substantially cylindrical structure with the metallic felt layer positioned radially inward of the metal layer. The opposite side edge

portions of the metal layer overlap and are coupled to one another at a coupling portion. Within the coupling portion, at least one of the opposite side edge portions of the metallic felt layer is interposed between the side edge portions of the metal layer.

Neither LeMont nor Boss discloses the coupling portion as set forth in claims 9, 13-39, and 41-51. The deficiencies of LeMont are explained above in detail. Boss, which has been cited for its disclosure of metallic felt properties, also fails to disclose the claimed coupling portion.

The Examiner relies upon Nelson as allegedly teaching “to wrap thermal insulation jackets around pipes and that coupling connections can be made without heat transfer paths.” (Office Action, page 5.) Applicant respectfully submits that Nelson does not overcome the deficiencies of LeMont and Boss, when taken alone or in combination.

Nelson discloses an outer metal skin 65 and insulation 70 applied on the inner surface of the metal skin. The side edges of the metal skin are curved flanges defining channels 67, 68 that interlock with one another to establish a hinge portion. As shown in Figs. 3, 4, 8, 10, and 11 and described at column 11, lines 26-30 of Nelson, insulation 70 is intentionally omitted from the flanged portion channels 67, 68 of metal skin 65, presumably to provide the pivoting hinge movement. As a consequence, neither of the side edge portions of the alleged metallic felt layer (i.e., insulation 70) is interposed between the side edge portions of metal skin 65 within the alleged coupling portion. Further, Applicant respectfully submits that a person having ordinary skill in the art would not have been motivated to modify Nelson to make the claimed invention. Nelson teaches interlocking its side edge flanges to establish a pivotal hinge joint. The prior art of record does not teach or reasonably suggest that including insulation within the hinge joint,

i.e., between the flanges of metal skin 65, would enhance or in any way benefit pivotal movement at the joint.

For these reasons, Applicant respectfully requests reconsideration and withdrawal of this rejection.

New Claims

Finally, Applicant has added new claims 52-63.

New claims 52, 55, 58, and 61 recite that the third and fourth side edge portions are coextensive with the first and second side edge portions, respectively. This feature is clearly lacking from Nelson, in which the hook-shaped flanges are devoid of insulation.

New claims 53, 56, 59, and 62 recite that the first and second hook-shaped side edge sections are inter-engaged with one another. Unlike the claimed invention, the interlocking hooks of Nelson do not incorporate insulation within the coupling portion, i.e., between the interlocking hooks.

New claims 54, 57, 60, and 63 recite that the coupling portions comprise a crimpable bow-shape section in which the first and third side edge portions are engaged with the second and fourth side edge portions. This arrangement is nowhere disclosed or reasonably suggested in the art of record.

For these reasons, allowance of new claims 52-63 is respectfully requested.

Conclusion

In view of the foregoing, Applicant respectfully submits that the pending claims are allowable and that the application is in condition for allowance. Reconsideration of the application in view of this response and its passage to issue are respectfully requested.

If, after reviewing the above, the Examiner believes any issues remain unresolved, the favor of an Examiner interview is requested and the Examiner is requested to contact the undersigned, by telephone, to schedule the same.

Respectfully submitted,

LINIAK, BERENATO & WHITE

By: 

Joseph W. Berenato, III.

Registration No. 30,546

Tel. No. (301) 896 0600

Fax. No. (301) 896-0607

April 18, 2005